AMENDMENTS TO THE CLAIMS

Claim 1 (original): A current mirror comprising:

a first transistor of a first conductivity type, the first transistor being diode-connected;

a second transistor of a second conductivity type, a drain of the second transistor being connected to a drain of the first transistor, and a gate of the second transistor being connected to a source of the first transistor;

a third transistor of the first conductivity type, a gate of the third transistor being connected to a gate of the first transistor; and

a fourth transistor of the first conductivity type, a gate of the fourth transistor being connected to a source of the second transistor.

Claim 2 (original): The current mirror of Claim 1, further comprising a current source connected to the source of the second transistor.

Claim 3 (original): The current mirror of Claim 1, wherein the first transistor, the second transistor, the third transistor, and the fourth transistor are matched transistors.

Claim 4 (original): The current mirror of Claim 1, wherein the first transistor, the third transistor, and the fourth transistor comprise n-type metal-oxide-semiconductor (NMOS) transistors, and

wherein the second transistor comprises a p-type metal-oxide-semiconductor (PMOS) transistor.

Claim 5 (original): The current mirror of Claim 4, wherein the

current source, the second transistor, and the first transistor are connected in series between a first supply voltage and a second supply voltage, and

wherein the fourth transistor and the third transistor are connected in series between an output terminal and the second supply voltage.

Claim 6 (original): The current mirror of Claim 1, wherein the first transistor, the third transistor, and the fourth transistor comprise p-type metal-oxide-semiconductor (PMOS) transistors, and

wherein the second transistor comprises an n-type metal-oxide-semiconductor (NMOS) transistor.

Claim 7 (original): The current mirror of Claim 6, wherein the first transistor, the second transistor, and the current source are connected in series between a first supply voltage and a second supply voltage, and

wherein the third transistor and the fourth transistor are connected in series between the first supply voltage and an output terminal.

Claim 8 (original): A method for generating an output current, the method comprising:

providing a reference current to a diode-connected transistor via a saturated transistor, wherein the diode-connected transistor and the saturated transistor have different conductivity types;

providing a gate voltage of the diode-connected transistor to a mirroring transistor to generate an output current;

providing the output current to an output terminal via

an output transistor; and

providing a source voltage of the saturated transistor to a gate of the output transistor.

Claim 9 (original): The method of Claim 8, wherein the diode-connected transistor, the saturated transistor, the mirroring transistor, and the output transistor are all matched transistors.

Claim 10 (original): The method of Claim 8, wherein the diode-connected transistor, the mirroring transistor, and the output transistor comprise n-type metal-oxide-semiconductor (NMOS) transistors, and

wherein the saturated transistor comprises a p-type metal-oxide-semiconductor (PMOS) transistor.

Claim 11 (original): The method of Claim 10, wherein providing the reference current to the diode-connected transistor via the saturated transistor comprises:

providing a current source, the saturated transistor, and the diode-connected transistor in series between a first supply voltage and a second supply voltage; and

providing the second supply voltage to a gate of the saturated transistor.

Claim 12 (original): The method of Claim 8, wherein the diode-connected transistor, the mirroring transistor, and the output transistor comprise p-type metal-oxide-semiconductor (PMOS) transistors, and

wherein the saturated transistor comprises an n-type metal-oxide-semiconductor (NMOS) transistor.

Claim 13 (original): The method of Claim 12, wherein providing the reference current to the diode-connected transistor via the saturated transistor comprises:

providing the diode-connected transistor, the saturated transistor, and a current source in series between a first supply voltage and a second supply voltage; and

providing the first supply voltage to a gate of the saturated transistor.

Claim 14 (original): A method for providing an output current, the method comprising:

cascoding a first transistor and a second transistor between an output terminal and a first supply voltage;

supplying a reference current to a third transistor via a fourth transistor, the third transistor being diode-connected, the third transistor and the fourth transistor having different conductivity types;

providing the first supply voltage to a gate of the fourth transistor;

providing a gate voltage of the third transistor to a gate of the second transistor; and

providing a source voltage of the fourth transistor to a gate of the first transistor.

Claim 15 (original): The method of Claim 14, wherein the first transistor, the second transistor, the third transistor, and the fourth transistor comprise matched transistors.

Claim 16 (original): The method of Claim 14, wherein the second transistor, the third transistor, and the fourth transistor comprise n-type metal-oxide-semiconductor (NMOS) transistors, and

wherein the first transistor comprises a p-type metal-oxide-semiconductor (PMOS) transistor.

Claim 17 (original): The method of Claim 14, wherein the second transistor, the third transistor, and the fourth transistor comprise P-type metal-oxide-semiconductor (PMOS) transistors, and

wherein the first transistor comprises an n-type metal-oxide-semiconductor (NMOS) transistor.